UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,606	05/19/2005	Jakke Makela	915-001.057	7630

4955 7590 10/17/2007

WARE FRESSOLA VAN DER SLUYS & ADOLPHSON, LLP
BRADFORD GREEN, BUILDING 5
755 MAIN STREET, P O BOX 224
MONROE, CT 06468

EXAMINER
AGUSTIN, PETER VINCENT

ART UNIT	PAPER NUMBER
2627	

MAIL DATE	DELIVERY MODE
10/17/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/535,606	MAKELA ET AL.	
	Examiner	Art Unit	
	P. Agustin	2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,3-5,7-9,23-31,33,34 and 47-50* is/are rejected.

7)☒ Claim(s) *2,6,10-22,32 and 35-46* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. This application is a 371 of PCT/FI02/00954, filed November 27, 2002.

2. Claims 1-50 are now pending.

Claim Objections

3. Claims 10, 12, 17, 18, 22, 28, 29, 40 & 43 are objected to because of the following informalities:

Claim 10, line 4: "focussing" should be --focusing--.

Claim 12, line 3: "focussing" should be --focusing--.

Claim 17, last line: "focussing" should be --focusing--.

Claim 18, line 3: "focussing" should be --focusing--.

Claim 22, line 1: "focussing" should be --focusing--.

Claim 28, lines 4 & 5: "focussed" should be --focused--.

Claim 29, lines 1-2: "first focussed beam" should be --first focused beam--.

Claim 29, line 2: "said second focussed beam at least" should be --said second focused beam forms at least--.

Claim 40, line 5: "initialised" should be --initialized--.

Claim 40, lines 9 & 10: "analysed" should be --analyzed--.

Claim 43, line 3: "focussing" should be --focusing--.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 3-5, 7-9, 23, 24, 26-31, 33, 34, 47, 49 & 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berg et al. (US 6,704,256) in view of Komurasaki et al. (US 4,334,299).

In regard to claim 1, Berg et al. disclose a device (Figures 3 & 8) comprising: an optical storage medium drive (column 1, lines 33-34: "optical drive"); an optical storage medium (Figure 3, element 330) comprising a plurality of data tracks (column 4, line 1: "tracks of a spinning medium 330); at least one access unit (Figure 8, element 102) for reading out data from said optical storage medium; at least one light source (Figure 3, element 302) arranged to produce at least one first light beam; optics (104) arranged to transmit and guide said first light beam towards said data tracks of the optical storage medium; and a detector (332) arranged to detect light beams that are reflected from the surface of the optical storage medium, wherein said access unit is arranged to pivot on one end at a pivot point (Figure 8: point where tracking axis 806 and focus axis 810 intersect; see column 7, lines 18-19: "tracking axis 806 and focus axis 810 can intersect") in order to move three-dimensionally in relation to the pivot point, said optics and said detector are arranged to move in accordance with the movement of said access unit (as shown in Figure 8), said optics are arranged to guide said first light beam directly to data tracks of the optical storage medium (see Figure 3) in accordance with the movement of said access unit, and said detector is arranged to receive the reflected beams of said first light beam (column 5, lines 13-17: "light beam…is reflected along a return path to phototodetectors 332") from said data tracks of the optical storage medium in order to control the movement of said access unit

(column 4, lines 49-50: "photodetectors 332 for reading data and controlling the laser power and the servomechanism").

In regard to claim 3, Berg et al. disclose that said access unit (102) is arranged to be movable to a position, in which said first light beam (output of 302) transmitted from said optics (104) towards said data tracks of the optical storage medium (330) form a first point on said data tracks of the optical storage medium (as shown in Figure 3) where the reflected light beams are detected to be in focus and on track by said detector (column 4, lines 49-50: "photodetectors 332 for reading data and controlling the laser power and the servomechanism").

In regard to claim 9, Berg et al. disclose that at least one light source (302) is arranged to be located at or substantial proximity of the pivot point of said access unit (as shown in Figure 8).

In regard to claim 23, Berg et al. disclose that said optics and said detector further comprise a lightguide arranged to transmit said reflected light beams of said first light beam along said access unit (e.g., reflected light is "guided" as shown by the arrows in Figure 3).

In regard to claim 24, Berg et al. disclose that said access unit an arm unit (abstract, line 2: "actuator arm").

In regard to claim 26, Berg et al. disclose that said device is a communication device (broadly interpreted, and consistent with applicant's disclosure, Figure 8 is a communication device because it involves transferring of electrical/optical signals between components).

However, Berg et al. do not disclose: in regard to claim 1, that the access unit writes data to said optical storage medium, that the at least one light source is arranged to produce at least a second light beam, and that said optics are arranged to guide said first light beam transversal

directly to data tracks of the optical storage medium; in regard to claim 3, that said access unit is arranged to be movable to a position, in which said second light beam transmitted from said optics towards said data tracks of the optical storage medium form a second point on said data tracks of the optical storage medium where the reflected light beams are detected to be in focus and on track by said detector; in regard to claim 4, that said first point is arranged to be located in a different location than said second point on said data tracks of the optical storage medium; in regard to claim 5, that said first point is arranged to be located slightly ahead of said second point on said data tracks of the optical storage medium; in regard to claim 7, that said optics are arranged to guide said first light beam transversal directly to said data tracks of the optical storage medium, and said second light beam perpendicular to said data tracks of the optical storage medium; and in regard to claim 8, that said first light beam is arranged to read out data from said data tracks of the optical storage medium and said second light beam is arranged to write data to said data tracks of the optical storage medium.

Komurasaki et al. disclose: in regard to claim 1, at least one access unit (see Figure 1) for reading out data from (note reproducing light source 32) and writing data to (note record light source 12) an optical storage medium (24, 26); at least one light source (12, 32) arranged to produce at least one first light beam (output of 32) and at least one second light beam (output of 12); and optics (34, 36, 38, 20, 22) are arranged to guide said first light beam (output of 32) transversal directly to data tracks of the optical storage medium (see reproducing light beam 40 in Figure 2); that said access unit is arranged to be movable to a position, in which said first light beam (output of 32) and said second light beam (output of 12) transmitted from said optics (34, 36, 38, 20, 22) towards said data tracks of the optical storage medium (24, 26) form a first point

and a second point (see Figure 2) on said data tracks of the optical storage medium where the reflected light beams are detected to be in focus and on track by said detector (column 5, line 46: "tracking control"; patent claim 1: "focusing…at a recording spot"); in regard to claim 4, that said first point is arranged to be located in a different location than said second point on said data tracks of the optical storage medium (as shown in Figure 2); in regard to claim 5, that said first point is arranged to be located slightly ahead of said second point on said data tracks of the optical storage medium (as shown in Figure 2); in regard to claim 7, that said optics (34, 36, 38, 20, 22) are arranged to guide said first light beam (output of 32) transversal directly to said data tracks of the optical storage medium (as shown in Figure 2), and said second light beam (output of 12) perpendicular to said data tracks of the optical storage medium (as shown in Figure 2); and in regard to claim 8, that said first light beam is arranged to read out data (column 4, line 9: "reproducing light beam 40") from said data tracks of the optical storage medium and said second light beam is arranged to write data (column 4, lines 19-20: "recording light beam 18") to said data tracks of the optical storage medium.

It would have been obvious to one of ordinary skill in the art at the time of invention to have applied the teachings of Komurasaki et al. to the device of Berg et al., the motivation being to observe recording characteristics immediately during recording to maintain recorded characteristics at good quality and to correctly reproduce a previously recorded signal (column 2, lines 19-25).

Claims 27-31, 33, 34, 47, 49 & 50 have limitations similar to those of claims 1, 3-5, 7, 8, 24 & 26; thus, they are rejected on the same basis.

6. Claims 25 & 48 rejected under 35 U.S.C. 103(a) as being unpatentable over Berg et al. & Komurasaki et al. as applied to claims 1 & 27 above, and further in view of Snyder et al. (US 6,215,755).

For a description of Berg et al. & Komurasaki et al., see the rejections above. Furthermore, Berg et al. disclose: in regard to claim 25, that the device comprises a first access unit (Figure 8, element 102) for reading out data from the optical storage medium, wherein said first access unit is an arm unit (abstract, line 2: "actuator arm"). Furthermore Komurasaki et al. disclose: in regard to claim 25, a second access unit (see Figure 1) for writing data to the optical storage medium. However, Berg et al. & Komurasaki et al. do not disclose: in regard to claim 25, that said second access unit is one of the following: an arm unit, a sledge unit or any combination of an arm and sledge unit.

Snyder et al. disclose: in regard to claim 25, an access unit which is an arm unit (abstract, line 1: "read/write arm"). It would have been obvious to one of ordinary skill in the art at the time of invention to have applied this teaching of Snyder et al. to the device of Berg et al. & Komurasaki et al., the motivation being to provide low rotational inertia, thereby reducing access time (column 1, lines 49-50; column 2, lines 15-18).

Claim 48 has limitations similar to those of claim 25; thus, it is rejected on the same basis.

Allowable Subject Matter

7. Claims 2, 6, 10-22, 32 & 35-46 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

8. Applicant's arguments filed September 20, 2007 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to P. Agustin whose telephone number is 571-272-7567. The examiner can normally be reached on Monday-Thursday 8:30-6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/P. Agustin/
Art Unit 2627

/William Korzuch/
SPE, Art Unit 2627